

TAKE-A-BYTE INC.

813 W. Columbia Dr.
Kennewick, WA 99336
(509) 582-3311



MICRO COMPUTERS

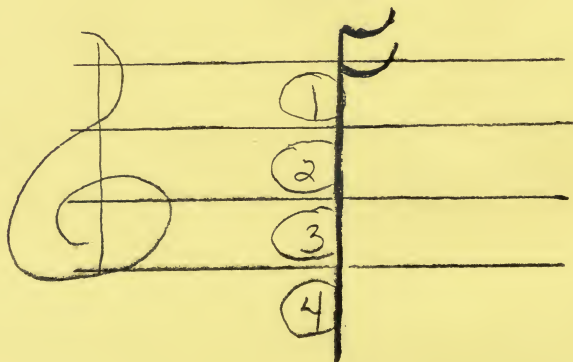
SOFTWARE

4 V E P

(Four Voice Editor Player)
MUSIC PROGRAM FOR THE

A T A R T

By Dave Schermerhorn
FEBRUARY, 1983



Disk 24K

TAPE 16K

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Four

Voice

Editor

Player

For ATARI®

Disk 24K Tape 16K

1 Purpose

This program uses the CRT screen to place notes on the musical staff. The notes are then compiled into an internal representation of a musical score.

During compilation the key signature (sharps and flats) are checked as well as any user errors that may be present during entry.

The Joystick is used as the primary input device the keyboard use is limited to selecting file names and selection of which measure to edit.

Voices are input up to four at a time and are displayed during playback along with the key signature.

Music files may be transferred to and from disk or tape.

2 Program description and memory requirements

Two programs are provided
on the disk

a MUSIC.OBJ

Contains editor, player
and disk routines
24K Memory needed

b PLAYER.OBJ

Contains player, file merger
and disk routines
16K Memory needed

Both programs are written in machine language and occupy the low end of memory.

3 Loading instructions

a Disk instructions

Insert disk in drive
boot the disk with DOS.
From DOS use the L option
to load the selected file.
The program will load
and run automatically

b Tape instructions

Insert tape in the drive
boot the tape using
selected program.
NOTE: MUSIC.OBJ is on
one side of the tape
PLAYER.OBJ is on the other
The tape will load and run
automatically.

MUSIC.OBJ

LOAD and SAVE

use the correct file name ie D:\MYMUSIC.MUS for disk
or C: for tape

EDITOR

A music staff appears the bright line in the middle is middle c
use this diagram to orient yourself to the regular staff found in
sheet music

COMPUTER STAFF (* are the bright lines)

```

*-----*C
*-----*A SHEET MUSIC STAFF
-----F-----
-----D-----
-----B-----
-----G-----
-----E-----
*-----*C
-----A-----
-----F-----
-----D-----
-----B-----
-----G-----

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In the upper left corner you will see a blinking cursor. Use a joystick connected to port 1 to control the position of the cursor. The character that is blinking is the FLAT character. To select characters first move the cursor to the middle of the screen for easy view. Next depress the trigger button. Now move the joystick left and right (while still holding the button down) you will see the characters change.

The entire character set is shown on page 7.

Some confusion might result from use of the word TRIPLETS. To enter a triplet *THREE* TRIPLET notes need to be entered not just one. Also take note that DOTTED notes have one DOT after them and TRIPLET notes have THREE DOTS after them. The DOTTED RESTS also have a DOT after them.

Now let go of the trigger and move the cursor a short distance. You will notice that you left a character behind. To erase the character place the cursor on top of it. Now depress the trigger and pull back or push forward on the joystick. Now move away from the position and the character is no longer there. Now enter some music using the enter and erase features try a musical scale of quarter notes. Don't forget you only have four voices to work with so the computer will only accept four. For now we will pretend not to know that so go ahead and enter five or six in a row (up and down not across).

Next you need to ask the computer to LOOK at the notes (it doesn't know it has any yet). To do that move the cursor to the LOOK spot in the lower right corner. As soon as the cursor touches the spot the screen should clear and be ready for your next input. However since you entered more than four voices in a row an error was detected. The error is announced by a bell tone and the location of the error is shown by a rapidly blinking character. To clear the error move the cursor to the affected row and erase one of the notes in that row.

The blinking character marks the first error it finds. It is quite possible to have other errors in the same measure. The other errors will not show up until you first get rid of the first error and then move the cursor to the LOOK spot for computer acceptance. When you finally succeed in getting the computer to accept some notes you can go back and reedit them by first entering EDIT mode and then use the ARROW keys on the keyboard to go back and edit the music. The left ARROW goes backward in the music score the right ARROW goes forward.

The ARROW keys are in the lower right section of the keyboard just above the ATARI logo key.

When you reach the measure you want just reedit it in the normal way.
NOTE: Every time you enter the EDIT mode the selected measure automatically goes to the end of the score.

PLAY

When you enter the PLAY mode music should immediately start playing and the notes you entered in the last measure will be shown.

To play the entire song press the RESET key and then enter the PLAY mode again.

You may have noticed that the notes flew by at lightning speed. To slow the notes down, first push forward on the joystick and hold it there. Now enter the PLAY mode, the speed of playback will be reduced.

To adjust the speed of playback (TEMPO) just move the stick forward and backward.

During playback you may sometimes hear a note you entered incorrectly, especially if it's a familiar song.

To correct this easily just PLAY the song again at a slow TEMPO and when you hear the note press the trigger button.

This action will pop you back into the EDIT mode *AFTER* the measure is done playing.

NOTE: You do not need to hold the triaser until the measure is done playing. Just press it and let go your request will be stored and acted on at the end of the measure.

Of course you could have accomplished the same action by entering the EDIT mode and moving to the flawed measure using the ARROW keys and correcting the problem.

 PLAYER.OBJ

This is simply the same type of PLAYER program as the one included in the EDITOR. The only difference is the EDITOR is not included. This allows you to have a larger music score in memory.

The MERGE mode allows you to join two music segments together and is included for the person with a small memory installed in the computer.

CAUTION: After joining two segments together there is no way to split them for another edit session. This poses no problem if you have enough memory during the EDIT mode to hold the entire file. If the file is larger than your memory the file will write right into the screen area. This is fairly interesting but hardly amusing if you just entered 4000 notes. I strongly recommend PRIOR to MERGING two files together make a backup of the individual files that way if you figured wrong at least you can still edit (and play) the backups. It will also stress the need for as much memory as you can afford.

Use these memory/note tables to help you decide what size score to enter.

MEMORY	SIZE OF SONG (notes)			
	DISK		TAPE	
	MUSIC.OBJ	PLAYER.OBJ	MUSIC.OBJ	PLAYER.OBJ
16K	0	900	4000	4900
24K	3900	4800	8000	12900
32K	11900	12800	16000	20900
48K	19900	21700	24000	24900

REPEAT MEASURES

This feature is achieved by entering the EDIT mode and then move to the measure to be repeated using the ARROW keys or another way would be to enter the Play mode and press the trigger at the selected measure.

When you have the correct measure for REPEAT just press the START key. You will hear a short BELL tone and nothing more happens. The BELL lets you know that this measure is selected for REPEAT. To actually REPEAT the measure move the cursor to the LOOK position.

The measure is now REPEATED at the end of the music score. To check that the measure is repeated PLAY the measure.

NOTE: There is no way to insert a new measure in the middle of a score.

NOTE: At any point in the Program you may press the RESET key to go back to the menu without any harm being done.

NOTE: There is no way to delete a measure other than erasing it using the Joystick. I had this feature in and removed it because it was too easy to wipe out the wrong measure.

SHARPS and FLATS

The Program protects against SHARP and FLAT entry on the wrong notes ie. there is no C FLAT. this occurs in the regular blinking character fashion and is corrected by erasing the character.

The key signature status is shown for each note in the left column during Play and editing. During editing the left column represents status at THE END of the displayed measure. Also the left column is only updated (during editing) when you use the ARROW keys.

For the computer to perform the task of deciding what you want and then deciding how to do it certain internal rules of logic (or illogic) are needed.

One of these is the rule of RESTS.

Since they say pictures are worth a thousands words you will find a file on the disk RITRONG.MUS. This file has a very slow TEMPO. The first measure shows the correct way to enter music into the computer. The second measure shows the incorrect way. Follow how the RESTS are used to fill up voices. Also note a REST if entered correctly can actually cause a PAUSE in the middle of a score. This effect is used quite often in music.

The song on the disk shows how to enter the notes, rests and keys.

7 Author info

Dave Schermerhorn
1708 S. Jean St.
Kennewick Wa. 99336
509 582 7319
Compuserve 74625-535













8 This is an initial circulation and as such you may find something I have not.

If so please contact me or leave your complaint suggestion at the store where you purchased the disk.








Significant errors will of course be corrected and an exchange notice will be posted at the store (your old disk for improved version)

On the notice you will find a tally of complaints and suggestions along with action taken.

9 Thank for your assistance in this first attempt (and my last ?) at producing software for the ATARI computer.

NOTES	TRIPLETS	REST	KEYS
1/32 			SHARP
1/16 			#
1/8 			FLAT
1/4 	none		b
1/2 	none		NATURAL
whole 			H

DOTTED NOTES

1/32 		
1/16 		
1/8 		
1/4 		
1/2 		



No
SIN
SIN
SO

4UEP

Four Voice Editor Player
(C) 1983 Sector Software
Written by Dave Schermerhorn

